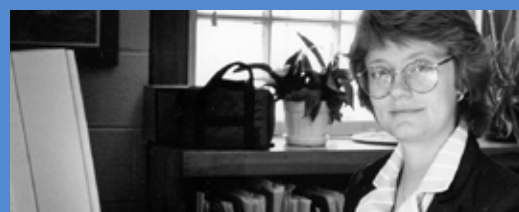


IPRC 2010 Annual Report

A publication of the University of North Carolina Injury Prevention Research Center



Honoring 22 Years of Service

Carol W. Runyan, Ph.D., MPH, Director of UNC IPRC, 1989-2011



About This Publication



UNC
INJURY PREVENTION
RESEARCH CENTER

The mission of the University of North Carolina Injury Prevention Research Center is to build the field of injury prevention and control through a combination of interdisciplinary scholarly approaches to research, intervention, and evaluation as well as through the training of the next generation of researchers and practitioners.

If you have an inquiry, please send to iprc@unc.edu. To subscribe to electronic publications, please sign up at www.iprc.unc.edu

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Carol W. Runyan retired from UNC on 7-31-11. Steve Marshall became Interim Director on 8-1-11.

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Fifth cover image clockwise from the top left, by Andrés Villaveces

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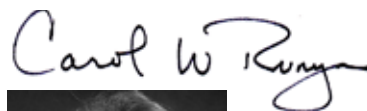
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During 2010, the Center continued to provide leadership to the field of injury and violence prevention through research, training, and advocacy for injury control. Dr. Smokowski won a major grant to create the NC-ACE: North Carolina Academic Center for Excellence in Youth Violence Prevention to implement and evaluate interventions for youth violence prevention. This project, along with the work on dating violence of Dr. Foshee, on child maltreatment of Dr. Desmond Runyan and his team, on sports injury research of Drs. Guskiewicz and Marshall, and on occupational research of Dr. Casteel and others, is providing evidence to guide interventions to reduce some of the greatest injury problems in the US and abroad. We provide leadership not only in North Carolina, but also globally through our many collaborations on program and policy development, such as developing policies for child labor reform in the US, and fostering evidence-based practice. For example, we are coordinating the evaluation of a large scale intervention focused on the Period of PURPLE Crying[®], an intervention designed to improve adult responses to crying infants and reduce child maltreatment by shaking. Also, the Center continued to provide leadership over the past year in training professionals. The PREVENT Program (Preventing Violence through Education, Networking and Technical Assistance) has trained more than 900 professionals from 44 states in the fundamentals of public health and primary prevention of violence. Our case studies of participating teams demonstrate that the program has made a difference.

I am encouraged by our successes and the energy that our faculty, staff and students bring to the Center. We remain challenged, however, by the lack of attention to injury and violence as critical public health problems, and by the lack of recognition of the need for support for this field. As noted in a paper published this year¹, if we used the funding for the National Cancer Institute at NIH and calibrated based on number of deaths or on the basis of lives lost before age 65, the annual funding for injury control research would be \$1.4 billion or \$8 billion respectively – a far cry from the \$145-150 million that the CDC currently receives. As we move forward, we need to be sure that this pattern of inadequate support changes. So, in addition to our other work, we need to remain advocates for the field in all sectors. Injury control requires attention in our curricula, in our funding, and in the emphases that our organizations give to the problem and to the work that we do. Though funding is tight, needs remain high. Injury is still the leading cause of death for much of the lifespan, resulting in 5 million deaths worldwide each year, about a fifth of whom are children². Injuries are major causes of disability and health care costs. They are highly preventable. But, we need good science to drive prevention.

In July 2011, after 32 years in Chapel Hill and serving as director of the IPRC since 1989, I will be leaving UNC to join the faculty at the Colorado School of Public Health. I have been extremely proud to have this opportunity since Patricia Waller and I formed the center in 1987. I applaud all my colleagues who have contributed to our considerable success, but emphasize that we must never rest on our laurels. I hope to continue many collaborations with colleagues connected to UNC IPRC as well as those throughout the US and around the world as we pursue our shared mission to build the field. There is much more work to be done!

Sincerely,



Carol W. Runyan retired from UNC on 7-31-11. Steve Marshall became Interim Director on 8-1-11.

¹Runyan CW, Hargarten S, Hemenway D, Peek-Asa, C, Cunningham R, Costich J, Gielen A. (2010). An Urgent Call to Action in Support of Injury Control Research Centers. *Amer. J. of Preventive Med.* 39(1): 89-92.

²Peden M, et al. (Eds). (2008). World report on child injury prevention. Geneva, Switzerland. World Health Organization.

Message from the Interim Director

It was with great sadness that I learned, early in 2011, that Carol and Des Runyan would be leaving UNC for the University of Colorado in Denver. Carol has joined the Department of Epidemiology in the newly-founded Colorado School of Public Health and is creating a new injury research initiative with Children's Hospital Colorado. Des now directs the internationally-recognized Kempe Center for the Prevention and Treatment of Child Abuse and Neglect.

To say that Carol has defined the success of the IPRC is an understatement. Her involvement with the IPRC spans nearly a quarter century; she has served as Director for 22 of those years. Carol has taken the IPRC from humble beginnings through to an internationally-recognized center conducting dozens of studies. She has trained literally hundreds of researchers and practitioners, through classroom teaching, mentoring, and through the highly successful PREVENT violence prevention training program, which she developed.

Carol is one of the most respected researchers in injury prevention, and her name rightly belongs beside other giants in the field such as William Haddon and Susan Baker. There are few other injury researchers whose impact on an injury control research center, and on the entire field of injury prevention, has been so sustained and so transformative.

Carol will be sorely missed. However, she retains many linkages to the IPRC, including several training activities and ongoing research projects. Carol will continue to be a nationally and internationally recognized leader in our field, and I have no doubt that her counsel will continue to be sought by, and help guide, the leadership of the UNC IPRC for many years to come.

The Carol W. Runyan Chair in Injury Prevention has been established to recognize Carol's many years of service to our university and to injury prevention. This chair fulfills Carol's dream of ensuring a lasting legacy for injury control scholarship at UNC. I encourage you consider a donation to this fund as part of your annual giving. You are invited to visit <http://www.iprc.unc.edu> to make a gift.

Join me in honoring the remarkable and unique legacy that is Carol's 22 years of leadership as director of the University of North Carolina Injury Prevention Research Center. Her contributions to the science of injury control stand as an impressive example of what can be achieved when visionary ideas are combined with dedication and commitment.



The Center's work is guided by the following broad goals:

To advance the science of injury control by conducting innovative research focused on occupational injury, residential injury, sports and recreational injury, and violence; and by facilitating research on a broad array of injury topics

To lead the development of new approaches to injury control policy and program development, implementation, and evaluation

To participate in providing national leadership in training the next generation of researchers and practitioners, and in providing continuing education for those already in the field

To bridge research and practice through successful exchanges of knowledge from each domain and to advance our understanding and practice of dissemination

To continue to cultivate a vigorous, interdisciplinary "community of scholars" who are affiliated with UNC IPRC and who are actively engaged in cutting-edge injury research and dissemination efforts

To evaluate and continually improve our organizational and management structure to enhance program growth, quality, and efficiency

The Injury Problem



Photo by Dan Sears

The significance of injury as a public health, social, and economic problem in our state, region, nation, and world is undeniable. Despite improvements over the past several decades, injury mortality rates in the U.S. remain high. Injuries—including both unintentional (for example, poisoning, motor vehicle crashes, falls, drowning) and intentional (e.g., violence such as homicide, suicide, and child maltreatment)—are the leading cause of death for persons between the ages of **1** and **44**, and are among the top ten causes of death throughout the life span, accounting for more than **179,000** deaths in the U.S. in 2006.¹ Southern states, including North Carolina, generally have higher rates of injury mortality than the rest of the country; in 2005, North Carolinians experienced an injury mortality rate of **67.22** per **100,000**, compared to a national rate of **58.82** per **100,000**.¹

In addressing the need to reduce injury-related disability and death, the Institute of Medicine (IOM), in its 1999 publication *Reducing the Burden of Injury*,² described the need for high quality research on unintentional injury and violence. The report strongly emphasized the need for developing and supporting the infrastructure of the field, including attention to:

- Improving coordination and collaboration among multiple types of agencies and constituencies;
- Strengthening the capacity for research and practice;
- Providing training and technical assistance to support states and communities in developing and implementing practical injury prevention plans, building and sustaining an injury prevention infrastructure, evaluating prevention programs, and making the transition from research to practice; and
- Integrating the field.²

The work of the UNC Injury Prevention Research Center is designed to address each and every one of these important approaches. Our activities include a focus on research, program development and evaluation, technical assistance, training, and the coordination and collaboration across multiple agencies and disciplines.

About the Center

The University of North Carolina Injury Prevention Research Center (UNC IPRC), one of five original “Centers of Excellence” for research in injury prevention, was created with funding from the Centers for Disease Control and Prevention in 1987.

Research and Policy

Our work emphasizes research on injuries in four areas: those that occur in residential environments; those that result from sports and recreational activities; those that occur in the context of work; and those that result from violent acts, including child maltreatment, youth violence, intimate partner violence, and suicide. In addition to addressing injury and violence prevention issues through research, UNC IPRC directs substantial attention to the planning, implementation and evaluation of both policies and interventions.

Collaboration

Collaboration is crucial as we partner with Safe States, the Society for the Advancement of Violence and Injury Research (SAVIR), the Southeastern Regional Injury Control Network (SERICN), North Carolina’s state injury unit, and multiple other state, regional, national and international partners. UNC IPRC also plays a major role in contributing to the development of injury control infrastructure and surveillance activities, training, and through the bridging of research and practice. On a national level, UNC IPRC provides leadership in enhancing the injury and violence prevention infrastructure by providing technical assistance to injury control practitioners and students. The Center responds to technical assistance requests from agencies, organizations and individuals throughout the U.S. and plays a particularly active role in collaborating with organizations in North Carolina. Additionally, through continuing education activities, we have served thousands of professionals working in settings that include state and local health departments, hospitals, community organizations, and academic institutions.

Training and Education

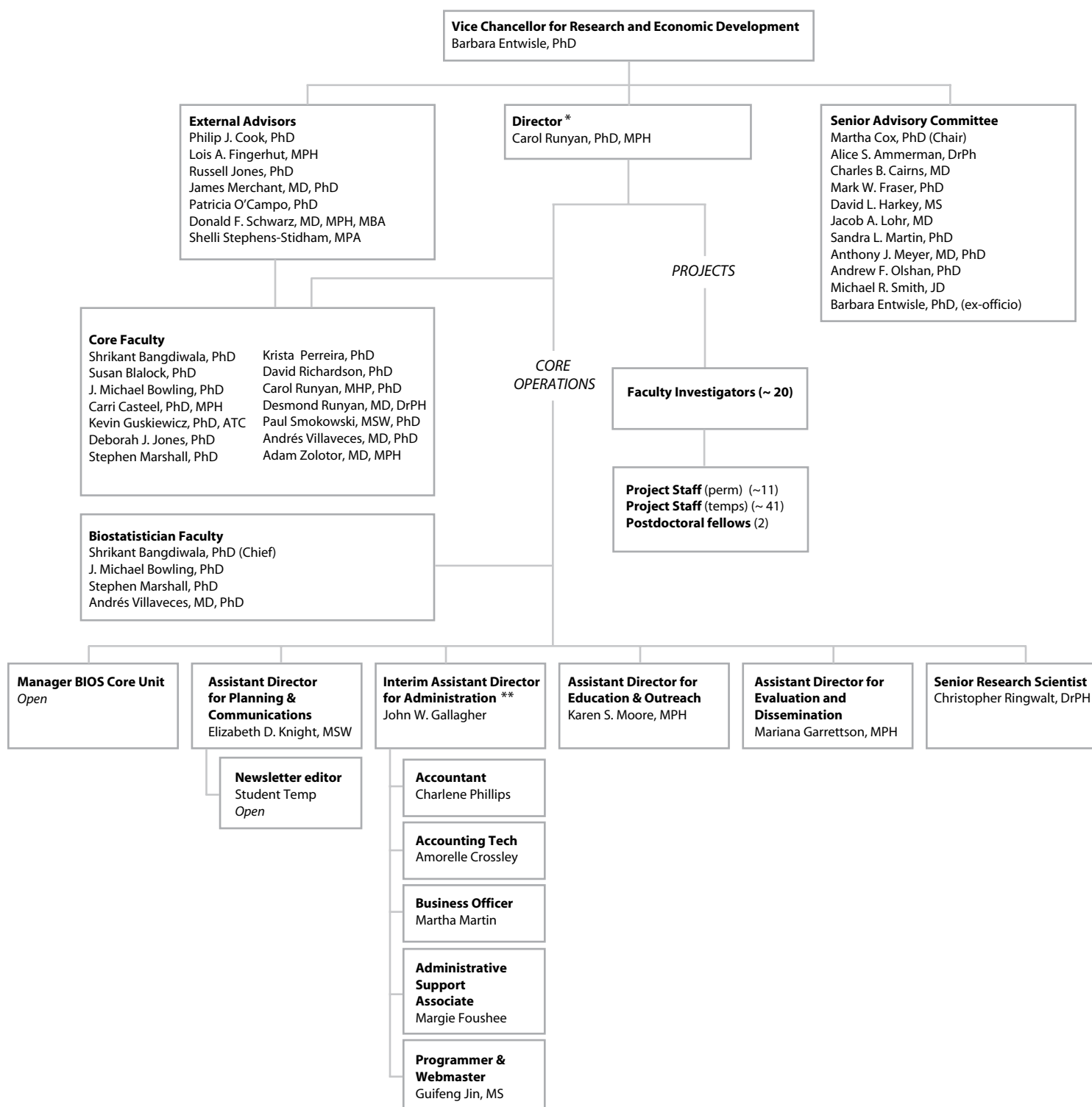
We maintain a strong commitment to students at the undergraduate, graduate, and professional levels. The Center employs undergraduate and graduate students and typically offers more than two dozen graduate research assistantships annually. We also sponsor undergraduate internships in injury and violence prevention, support a student grants program to encourage student-led injury research, and offer an annual prize that awards graduate and professional students for excellence in research contributions. On the UNC campus, UNC IPRC-affiliated faculty are active in teaching classes and engaging students in Center activities that further develop the next generation of injury researchers and practitioners and expand the range of disciplines involved in the field.

Sustainability

Our plan is to continue to employ an interdisciplinary approach to teaching both unintentional injury and violence prevention and to advance the science and practice of injury and violence prevention intervention and evaluation. Toward this end, the Center has developed and nurtured relationships with multiple academic institutions and with a diverse array of professionals, agencies and organizations in public health, clinical medicine, criminal justice, psychology, social work, and the military, among others. We recognize the potential to make an even greater contribution to the field by creating partnerships with scholars and practitioners who represent multiple disciplines.

Throughout our history, our efforts have created new knowledge and have led to the application of research findings in the field. The work of the Center has had notable impact on the field and beyond, resulting in changes in state policy that address, among others, safety in childcare, increased use of residential smoke detectors, and control of the sale of pyrotechnics; implementation of science-based prevention programs at the state, tribal, regional and national levels; enhancement of injury surveillance; and development of workforce capacity.

Organizational Chart 2010



*Carol W. Runyan retired from UNC on 7-31-11. Stephen Marshall became Interim Director on 8-1-11.

**Tonya Watkins became Assistant Director for Administration 7-1-2011.

UNC IPRC Senior Advisory Committee

Martha Cox, PhD (Chair)

Director, Center for Developmental Science and Professor of Psychology

Alice Ammerman, DrPH

Director, Center for Health Promotion and Disease Prevention and Professor of Nutrition

Charles Cairns, MD

Professor and Chair of Emergency Medicine

Mark Fraser, PhD

John A. Tate Distinguished Professor for Children in Need and Associate Dean for Research, School of Social Work

David Harkey, MS

Director, Highway Safety Research Center

Jacob Lohr, MD

Lohr Distinguished Professor of General Pediatrics and Chief of the Division of General Pediatrics

Sandra Martin, PhD Associate Dean for Research, Gillings School of Global Public Health, Professor of Maternal and Child Health

Anthony Meyer, MD, PhD

Professor and Chair of Surgery

Andrew Olshan, PhD

Professor and Chair of Epidemiology

Michael Smith, JD

Vice Chancellor for Engagement and Dean, School of Government and Professor of Public Law and Government

Barbara Entwisle, PhD (Ex-officio)

Vice Chancellor for Research and Economic Development

UNC IPRC External Advisors

Philip Cook, PhD

Terry Sanford Professor of Public Policy Studies; Professor of Economics and Sociology and Associate Director, Terry Sanford Institute of Public Policy at Duke University

Lois Fingerhut, MPH

Private consultant (formerly Special Assistant for Injury Epidemiology, National Center for Health Statistics)

Russell T. Jones, PhD

Professor of Psychology, Virginia Polytechnic Institute and State University

James Merchant, MD PhD

Professor, Department of Occupational and Environmental Health, College of Public Health, The University of Iowa

Patricia O'Campo, PhD

Professor and Director, Centre for Research on Inner City Health, University of Toronto

Shelli Stephens-Stidham, MPA

Director, Greater Dallas Injury Prevention Center

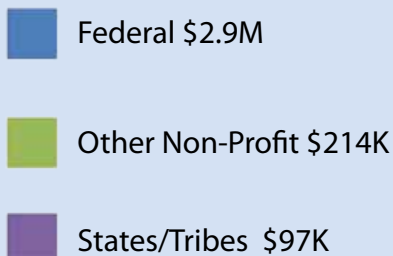
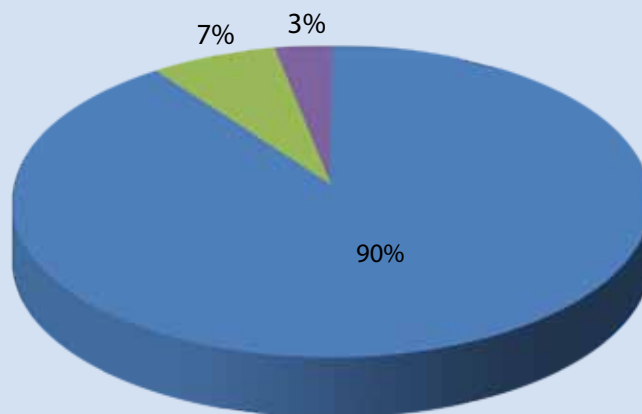
Donald Schwarz, MD, MPH, MBA

Deputy Mayor of Health and Opportunity and Health Commissioner for the City of Philadelphia

Funding Sources 2010

Federal	\$2,864,288
Administration for Children, Youth and Families	\$500,000
Fogarty International Center	\$113,203
Indian Health Services	\$225,840
Centers for Disease Control and Prevention	\$2,025,245
Other Non-Profit	\$214,402
American Academy of Family Physicians	\$29,125
Duke University	\$104,700
Ontario Neurotrauma Foundation	\$16,551
Research Triangle Institute	\$64,026
States/Tribes	\$97,382
North Carolina Division of Public Health	\$74,660
University of Iowa	\$22,722
Grand Total	\$3,176,072

Research Funding Sources FY 2010





Carol W. Runyan, Ph.D., MPH*

Director, UNC Injury Prevention Research Center
Professor, Department of Health Behavior and Health Education;
and Adjunct Professor, Department of Epidemiology, UNC Gillings School of Global Public Health
Professor, Department of Pediatrics, UNC School of Medicine



Shrikant I. Bangdiwala, Ph.D.

Chief, UNC IPRC Biostatistical Core Unit
Research Professor, Department of Biostatistics, UNC Gillings School of Global Public Health



Susan J. Blalock, Ph.D., MPH

Associate Professor and Director of Graduate Studies, Division of Pharmaceutical Outcomes and Policy, UNC School of Pharmacy



J. Michael Bowling, Ph.D.

Statistician and Research Associate Professor, Department of Health Behavior and Health Education, and Adjunct Associate Professor, Department of Biostatistics, UNC Gillings School of Global Public Health



Carri Casteel, Ph.D., MPH

Research Associate Professor, Department of Epidemiology, UNC Gillings School of Global Public Health



Paul Smokowski, M.S.W., Ph.D.
Professor at the UNC School of Social Work



Andrés Villaveces, M.D., Ph.D.
Research Assistant Professor, Department of Epidemiology, UNC Gillings School of Global Public Health

Krista Perreira, Ph.D.
Associate Professor, Department of Public Policy; and Adjunct Associate Professor, Department of Health Behavior and Health Education, UNC Gillings School of Global Public Health



Adam Zolotor, M.D., MPH
Assistant Professor, Department of Family Medicine; and Adjunct Professor, Department of Pediatrics, UNC School of Medicine Associate Medical Director, North Carolina Child Medical Evaluation Program

Preston “Chip” Rich, M.D.
Trauma Medical Director, University of North Carolina Health Care Systems
Division Chief, Trauma and Critical Care Services – UNC Associate Professor, Departments of Surgery and Anesthesiology, UNC School of Medicine



Kevin M. Guskiewicz, Ph.D., A.T.C.
Professor and Chair in the UNC Department of Exercise and Sports Science, and Kenan Distinguished Professor. Director of the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center, UNC College of Arts & Sciences

David Richardson, Ph.D.
Associate Professor, Department of Epidemiology, UNC Gillings School of Global Public Health



Deborah Jones, Ph.D.
Associate Professor, Department of Psychology, UNC College of Arts & Sciences

Desmond Runyan, M.D., DrPH
Professor, Department of Social Medicine; and Professor, Department of Pediatrics, UNC School of Medicine
Clinical Professor, Department of Epidemiology, UNC Gillings School of Global Public Health
National Program Director, Robert Wood Johnson Clinical Scholars Program



Stephen W. Marshall, Ph.D.*
Professor, Department of Epidemiology, UNC Gillings School of Global Public Health

** Carol W. Runyan retired from UNC on 7-31-11.
Stephen Marshall became Interim Director on 8-1-11.*

UNC IPRC 2010

Through education, research, training and outreach efforts, UNC IPRC continues to have a significant impact on injury control. This influence is largely the direct result of our efforts to bridge practice and research, and has affected organizational and governmental policies, injury and violence practice, and workforce infrastructure at the local, state, tribal, and national and global levels. Selected highlights from the Center's 2010 activities are below.

Global Impact on International Child Maltreatment Surveillance

UNC IPRC Core faculty Desmond Runyan and Adam Zolotor led a team of international researchers that developed the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) Child Abuse Screening Tool that allows lower- to middle income countries to collect data on violence against children to drive policy and monitor policy effectiveness over time. Partners included Queensland University of Technology, the International Society for the Prevention of Child Abuse and Neglect, and the United Nations Children's Fund.

Local, State and National Impact on Sport-Related Traumatic Brain Injury

UNC is well recognized nationally and internationally as a research leader focusing on the prevention and management of these often debilitating and potentially catastrophic brain injuries. The findings from research conducted at UNC have contributed to changes in the prevention, assessment and response to traumatic brain injuries in both youth and adult athletes in the US and Canada, and have prompted changes in the policies of professional organizations, including the NFL. IPRC Core faculty member Kevin Guskiewicz directs the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center, which was established in 2010, and serves on two subcommittees of the NFL's Head, Neck & Spine Medical Committee. Dr. Guskiewicz's findings and advocacy have been well disseminated to the general public through extensive media coverage, including a recent feature in the *New York Times*.

Youth Violence Prevention

North Carolina Academic Center for Excellence in Youth Violence Prevention: NC-ACE. The CDC's National Center for Injury Prevention and Control has made a large award to establish the nation's first rural youth violence prevention center in Robeson County, NC. The NC-ACE in Youth Violence Prevention is a collaboration between UNC IPRC, the UNC School of Social Work, and community partners in Robeson County. The project is led by IPRC Core faculty Paul Smokowski.

National Impact on Policy Advocacy for Injury Control

A paper by Center Director Carol Runyan and colleagues from seven other injury centers, published in the *American Journal of Preventive Medicine* (July 2010), makes the case for increased funding for injury control and will be used to support advocacy efforts to build the field.

State and National Impact on Youth Labor Safety

At the request of the NC Child Fatality Task Force, IPRC Director Carol Runyan and Kimberly Rauscher provided information about the hazards associated with youth work as the General Assembly deliberated legislation that, once passed, increased penalties for businesses that violate child labor laws. This work has also been used to inform federal policy. For example, as stated in a letter from Arthur M. Kerschner, Jr., Acting Director, Office of Enforcement Policy and Procedures, US Department of Labor "...We have relied heavily on the published findings of the (UNC Injury Prevention) Research Center. These findings have helped us plot and prioritize both our enforcement and rulemaking strategies. They provide us with important insights into ways of reducing occupational injuries to young workers that we may not have previously considered."

Local and State Level Impact on Child Maltreatment Prevention

The Center continues to play a key role in child maltreatment prevention in North Carolina, including working with the NC Child Fatality Task Force, Prevent Child Abuse NC, the Department of Public Health and Safe Kids NC. A team led by Desmond Runyan delivers the crying education and Shaken Baby Syndrome prevention intervention entitled The Period of PURPLE Crying® to the parents of every child born in a hospital in North Carolina. Additionally, participants in IPRC's PREVENT training program are influencing state and local policy throughout the United States. For example, a team from Ohio successfully advocated for legislation banning corporal punishment in schools.



Impact in North Carolina: Testimonials

*"The University of North Carolina's Injury Prevention Research Center (IPRC) is an invaluable partner to the growth and development of the injury and violence community in North Carolina. The support of IPRC was a key factor in my decision to apply and accept the position as Head of the Injury and Violence Prevention Branch with the North Carolina Division of Public Health; I had worked with IPRC staff in the past and knew how valuable they are in fostering excellence in injury and violence prevention. IPRC supports the injury community in North Carolina through work force development, research projects, program evaluation, and on-going technical assistance. IPRC staff serve on our State Advisory Council, serve as evaluators for state injury and violence prevention programs, and provide assistance to our staff. **North Carolina is widely recognized as a leader in injury and violence prevention in the country; the long standing support of IPRC is a key factor in North Carolina's success.**"*

Alan Dellapenna, MPH, Head, Injury and Violence Prevention Branch, North Carolina Department of Public Health

*"...We in North Carolina and across the region are extremely fortunate to have the expertise of the UNC Injury Prevention Research Center. The staff are extremely responsive when we ask for your expertise and advice on health policy issues facing the state. **IPRC serves as a strong model for collaborative research, training and outreach --one that helps translate research into realistic and actionable public health practices.**"*

Pam Silberman, JD, MPH, President and CEO, North Carolina Institute of Medicine

*"...The information collected by the Center regarding the risks of injury and death to children has proven invaluable. **The Center provides a service to Safe Kids North Carolina that we have been unable to find anywhere else....the two reports that IPRC developed for the state office have allowed coalitions across our state to tailor their programs based on the community needs...**"*

Kelly Ransdell, Director, Safe Kids North Carolina

Faculty Achievements and Honors

Dr. Kevin Guskiewicz was named Director of Carolina's newly established Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center. Dr. Guskiewicz is a Kenan Distinguished Professor and Chair of the Department of Exercise and Sport Science.

Dr. Carri Casteel received the Seminal Research Publication Award from the Society for the Advancement of Violence and Injury Research for the following article: Casteel C., Peek-Asa C., Greenland S., Chu LD, and Kraus J.F. "Effectiveness of a workplace violence intervention in small retail and service establishments." *Journal of Occupational and Environmental Medicine* 50(12) (2008):1365-1370.

Dr. Krista Perreira received the 2010 Phillip and Ruth Hettleman Prize for Artistic and Scholarly Achievement for her scholarship on Latino populations and immigration.

Dr. Andrés Villavices received the Publication of the Year Award of the American Society for Information Science & Technology and Special Interest Group for International Information Issues for the article, "Information Visualization Services in a Library? A Public Health Case Study," and the entire issue of *Bulletin of the American Society for Information Science and Technology* 35(5) (June/July 2009): 13-18

Dr. Adam Zolotor received the UNC School of Medicine's James W. Woods Junior Faculty Award, which supports promising young members of the medical school's clinical faculty early in their academic careers.

Dr. Shrikant Bangdiwala was designated 'Professor Extraordinary' by the University of South Africa, Johannesburg, March 2010

UNC IPRC offers both education in traditional classroom settings and continuing education opportunities for public health and social work practitioners, medical providers, and others to learn more about injury and violence prevention. Through multiple training initiatives, UNC IPRC plays a central role in bridging the gap between research and practice, and building the injury and violence prevention infrastructure and workforce. Education and training efforts occur on the UNC campus and reach undergraduate students through post graduate fellows, and students and professionals statewide, nationally and internationally. In addition, the Center actively works to provide mentorship to newer investigators.

IPRC Seminars, Lectures & Exchange

The **UNC Seminar Series** provides an opportunity for UNC faculty, staff, students and the community at large to learn about the latest findings from injury research and practice on and beyond the UNC campus. The series covered a variety of topics in 2010, including: special health care needs among children reported for maltreatment; preventing falls through enhanced pharmaceutical care; the Carolinas Poison Center's role in injury prevention; using social marketing to promote falls prevention among older adults; adolescent female sex workers—invisibility, violence and HIV; and issues related to the terrorist threats.

The annual **Patricia F. Waller Lecture** brings to campus a leading scholar in the injury field to present on cutting edge issues in the field. In 2010, the presentation, "Pediatric Injury Prevention: From the Trenches to the Ivory Tower and Back Again," was made by Andrea C. Gielen, ScD and Director, the Center for Injury and Research Policy at the Johns Hopkins Bloomberg School of Public Health.

Small group meetings with seminar and lecture presenters are organized and held at IPRC, and provide the opportunity to learn more about each others' work in a less formal setting. This opportunity is considered a vital part of IPRC's engagement with community partners, as well as an opportunity for UNC students, staff and faculty to interact with visiting scholars.

The monthly **IPRC Exchange** provides a forum in which students, faculty and staff present on-going injury-related work, and receive feedback from colleagues.

The Center provides **mentoring** in multiple formats and for multiple audiences. For example, in **grant writing workshops** and other mentoring, senior IPRC faculty provide on-going mentoring to junior faculty and post-doctoral fellows in the development of initial federal grant submissions. Student opportunities at IPRC in 2010 included hosting undergraduate summer internships for students exploring careers in public health, internships and Capstone projects for masters students in social work and public health, pre and post doctoral training, and employment as research assistants. The IPRC faculty also provide vital mentoring and networking to graduates seeking employment in the field of injury and violence prevention.

IPRC faculty and staff regularly provide consultation and training opportunities to local, state and national partners, and are frequent invited speakers at academic institutions and at professional workshops and conferences; for instance, our national training effort to build workforce capacity and national leadership in child maltreatment, The **PREVENT Child Maltreatment Institute**, is described on p. 34. The Institute is easily adapted to other areas of injury and violence, as it focuses on instilling core competencies in public health injury prevention that are applicable to injury prevention in general. IPRC's Assistant Director for Evaluation, Mariana Garrettson, and Center Director Carol Runyan **chaired and co-chaired the Training and Infrastructure Committee of SAVIR** throughout 2010. Off-campus, IPRC faculty have taught over 15 courses and workshops related to injury and violence prevention, and presented numerous invited presentations nationally and internationally.

On campus, UNC IPRC faculty taught several courses in 2010, including "Injury and Violence as Public Health Problems." This three-credit course is offered yearly by the UNC School of Public Health with support from UNC IPRC, and was led by Center Director Carol Runyan and Dr. Jonathan Kotch. The course considers the causes and consequences of traumatic injury within developmental, social, and economic contexts, and dilemmas in injury research and prevention. Injuries associated with transportation, violence, the home, and occupational environments are included. Drs. Carol Runyan and Andrés Villaveces taught a required on-going module for third year medical students in their surgery rotation and Dr. Villaveces taught modules in five UNC courses, including four courses in the School of Public Health. Dr. Runyan and IPRC Assistant Director for Education and Training Ms. Karen Moore also taught a campus-wide course on injury and violence as public health problems which enrolled 22 students, 20 of whom were undergraduates.

Student Research Awards

Annually, IPRC funds student research grants. 2010 student research awards included the following.

Reliability of a mobile device compared to a standard computer monitor for viewing x-rays for orthopaedic diagnosis and treatment planning, examined the hypothesis that orthopaedic x-rays viewed on a mobile device, such as a smartphone, can be used for initial diagnosis and treatment planning. Joshua Tennant, MPH, MD (PI). Dr. Tennant is a resident in the Department of Orthopaedics, UNC School of Medicine. His mentor for the project was Douglas R. Dirschl, MD, Professor and Chairman, UNC Orthopaedics.

Trajectories of Adolescent Dating Abuse Perpetration and Victimization: The Impact of Pubertal Timing and the Role of Peer Context, utilized data from a multi-wave study of adolescents conducted between 2002 and 2005 in two rural counties in North Carolina to investigate two aims. These included 1) examining the association between the pubertal timing in both boys and girls and the developmental trajectories of adolescent dating abuse perpetration and victimization, and 2) testing the theoretically based processes through which pubertal timing influences the development of dating abuse. Ashley Brooks, MPH (PI). Ms. Brooks is a doctoral student in The Gillings School of Global Public Health, Department of Health Education and Behavior. Her mentor for this project was Vangie A. Foshee, Ph.D.



Occupational Injury

FEATURED PROJECT

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Occupational injuries were responsible for 4,551 deaths in the US in 2009, 129 of which occurred in North Carolina. Over 3.2 million nonfatal injuries are recorded annually, over a million of which involved days away from work – an injury rate of 117 per 10,000 full-time workers. Transportation remains the largest source of fatal injuries, though homicide is tied with transportation among female workers.¹ The fatal injury rate remains highest in the agricultural industry.² Young workers are often inexperienced and insufficiently trained, yet frequently work in hazard-rich environments. Approximately 360 workers under age 24 die from work-related injuries, and 795,000 injuries in young workers require medical attention every year.³

FEATURED PROJECT

Translation of a Robbery and Violence Prevention Program to High Risk Businesses

Workers in the retail industry are at greatest risk for workplace homicide, and over two-thirds of these homicides are committed during a robbery. Evidence-based programs that include employee training, cash handling procedures, safe management, interior and exterior lighting, visibility, access control, and signage to indicate safety procedures have shown great success in reducing robbery and violent crime in retail settings. Despite strong evidence of program success, research indicates that many small businesses have implemented very few to none of the program recommendations, and that what is implemented is often done so incorrectly. The project team is conducting a translational study where an evidence-based robbery and violence prevention program is disseminated to businesses through police departments. The objectives of the study are to identify optimal, sustainable methods in which law enforcement can: 1) recruit businesses to participate in an evidence-based robbery and violence prevention program, and 2) achieve high levels of compliance to program recommendations.

Project Period

2006 – 2013, Pilot Project: 2007 – 2011

Key Personnel

Carri Casteel, PhD, MPH (PI); Maryalice Nocera, MSN; Catherine Vladutiu, MPH; Stephanie Finkbeiner; Carol Runyan, PhD, MPH; Corinne Peek-Asa, PhD; Harlan Amandus, PhD; Daniel Hartley, EdD; Detective Martin Ennis; and Commander Tom Chronister, CPP.

Other Organizations or Institutions Represented

University of Iowa; National Institute for Occupational Safety and Health; Oxnard, California Police Department

Funding

National Institute for Occupational Safety and Health

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Violence Against Home Health and Hospice Workers

Health care workers frequently face the threat of violence at work, and this violence can lead to fear, stress, physical injury, and even death. Home health and hospice care workers experience violent hazards primarily associated with the provision of medical care to patients who are aggressive, disoriented, or under the influence of illegal substances, and they provide this care in an uncontrolled setting. Threats can come from crime-ridden neighborhoods, hazards within the patient's home, and from the patient and other household occupants. The goal of this project is to increase implementation of comprehensive security programs into home health and hospice agencies to reduce violent events and their consequences for home care providers. The objectives of the project are to understand the interaction of organizational, worker and job characteristics, and the external environment that contribute to and protect home health and hospice workers from violence, and to identify the most effective strategies to intervene.

Project Period

2006 - 2010

Key Personnel

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Other Organizations or Institutions Represented

University of Iowa; California Department of Health Services; University of California San Francisco

Funding

National Institute of Occupational Safety and Health

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Workplace Violence Prevention Programs in New Jersey Health Care Facilities: A Pilot Study

Healthcare workers are nearly five times more likely to be victims of violence than workers in all industries combined. While healthcare workers are not at particularly high risk for job-related homicide, nearly 60% of all nonfatal assaults occurring in private industry are experienced in healthcare. Eight states have enacted laws to reduce violence against healthcare workers by calling for workplace violence prevention programs. However, little is understood about how effective these laws are in reducing violence against workers. The long-term goal of the project is to understand the impact of state legislation on the comprehensiveness of healthcare facilities' workplace violence prevention programs and rates of employee workplace violence-related injury. The objective of the study is two-fold: 1) to examine healthcare facility compliance to the New Jersey Violence Prevention in Health Care Facilities Act, and 2) to evaluate the effectiveness of the Act in reducing assault injuries to workers.

Project Period

2010 - 2011

Key Personnel

Carri Casteel, PhD, MPH; Marilyn Ridenour, MPH; Daniel Hartley, EdD; James Blando, PhD

Other Organizations or Institutions Represented

National Institute for Occupational Safety and Health; Old Dominion University

Funding

Subcontract from the National Institute for Occupational Safety and Health

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Young Worker Fatalities and Violations of Labor and Safety Regulations: Moving Toward a Solution

Evidence shows that non-fatal injuries can occur when youth are illegally employed, yet little research has looked at the relationship between fatal young worker injuries and labor and safety violations. The first aim of the study is to understand the extent to which violations of child labor laws and/or health and safety standards are related to adolescent occupational fatalities by capitalizing on the excellent data available within the NC medical examiner system. The second is to explore how the current enforcement environment might have an impact on this relationship by examining the extent and nature of investigations carried out by federal and NC regulatory agencies on identified young worker fatalities. The last aim is to identify current challenges in enforcement and develop strategies to overcome these challenges and improve the protection of young workers by engaging with a range of local stakeholders through focus groups, in-depth interviews, and a multi-organizational capstone meeting. Data on the magnitude and nature of young worker fatalities in NC between 1990 and 2008 have been published in the American Journal of Industrial Medicine. Findings on child labor violations and enforcement activities presented at the 2010 Annual Meeting of the American Public Health Association are being prepared for journal submission.

Project Period

2008 - 2012

Key Personnel

Kimberly J. Rauscher, MA, ScD (PI); Carol W. Runyan, PhD, MPH; and Deborah Radish, MD

Other Organizations or Institutions Represented:

West Virginia University, North Carolina Office of the Chief Medical Examiner

Funding

National Institute for Occupational Safety and Health

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Criminal Background Checks at the Workplace

The purpose of this pilot study is to survey human resources personnel from a wide range of industries in order to understand why employers run criminal background checks and how best to design a future study that measures the effectiveness of criminal background checks at the workplace. The survey was completed in September, and a manuscript is now being prepared that focuses on the reasons employers run criminal background checks. The most frequent reasons given for running criminal background checks were to prevent liability and criminal misconduct. The manuscript will review the literature on this topic to assess how strong the evidence is that criminal background checks can prevent these outcomes.

Project Period

2009 - 2011

Key Personnel

Matthew W. Pierce, JD, MPH (PI)

Funding

North Carolina Occupational Safety and Health Education and Research Center through the National Institute for Occupational Safety and Health (NIOSH)

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Improving the Experiences of Young Workers in North America: An Interdisciplinary Educational Program

Young workers in North America have much in common in the way they experience the workplace for their benefit or detriment. The purpose of this project is to carry out a series of symposia designed to help a diverse group of scholars and practitioners update and synthesize their understanding of the benefits and risks of youth employment and to set an agenda for future scientific and programmatic directions throughout the U.S. and Canada. The program consists of a series of four sessions with distinct themes to be held in the U.S. and Canada over a three year period. These educational sessions are bringing together scholars and practitioners from a wide range of disciplines who are concerned with youth employment and its effects. The project is working to compile papers generated in the project into a special issue of a journal, including recommendations for policy and research.

Project Period

2006 - 2010

Key Personnel

Carol W. Runyan, PhD, MPH (PI); John H. Lewko, PhD;
Kimberly J. Rauscher, MA, ScD

Other Organizations or Institutions Represented

Laurentian University (Canada) ; Ontario Neurotrauma Foundation (Canada); West Virginia University

Funding:

National Institute of Occupational Safety and Health; Ontario Neurotrauma Foundation (Canada)

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"Most teens work – and work has many benefits. Yet the potential hazards have not been adequately examined. We are trying to understand how to make work safer for young people." - Dr. Carol Runyan

Occupational Health Literacy, Socioeconomic Status & Work-related Injury to Teens

This study examines the relationship between adolescent health literacy as it applies to the workplace, i.e., “occupational health literacy,” (OHL) and work-related injury (WRI), which affects approximately 200,000 U.S. adolescents under 18 every year. This study will examine OHL as both a determinant of WRI prevalence among adolescents and as a mediating factor in the known association between socioeconomic status (SES) and adolescent WRI. We will take advantage of a unique dataset containing information on 2,315 adolescent workers of varying levels of SES in five cities across the US. These data include WRI prevalence, several measures of SES and an array of variables used to measure OHL (e.g., access to health and safety information and demonstrated health and safety knowledge and skills). Findings will be useful in developing interventions to enhance OHL among working youth, with specific efforts targeted at improving literacy among disadvantaged youth, to reduce their disproportionate injury burden. Findings on the association between OHL and WRI have been submitted for presentation at the 2011 Annual Meeting of the American Public Health Association, and findings on the relationship between SES and WRI have been submitted to the 2011 NIOSH-sponsored conference “Eliminating Health and Safety Disparities at Work.” Data analysis is ongoing and results are being prepared for journal submission.

Project Period

2009 - 2011

Key Personnel

Kimberly J. Rauscher, MA, ScD (PI); Douglas J. Myers MA, ScD (Co-PI); J. Michael Bowling, PhD; Carol W. Runyan, PhD, MPH

Other Organizations or Institutions Represented

West Virginia University; Duke University School of Medicine

Funding

National Institute for Occupational Safety and Health

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Sports & Recreational Injury

FEATURED PROJECT

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Photo by Robyn Gayle





Despite the benefits of participation in sports and other recreational activities, athletes are at risk of sports-related injuries at the school and professional level. Close to 1.5 million injuries occur in high-school athletes every year at a rate of 2.4 per 1,000 athlete exposures. For some sports, such as football, these rates can climb to 12 per 1,000 exposures during competitive play.¹ A central focus of sports injury research at UNC is traumatic brain injury. Close to 450,000 sports-related head injuries are seen in U.S. emergency departments every year. A fifth of these head injuries, and a third of all sports-related injuries occur in cyclists. Football, however, accounts for 300,000 traumatic brain injuries, such as concussion, every year.² Collaboration between UNC IPRC and the Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center, also at UNC, has focused on this incredible epidemic.

FEATURED PROJECT

JUMP-ACL (Epidemiology of Jump-Landing Movements and ACL Injury)

Anterior Cruciate Ligament (ACL) injuries are devastating knee injuries that typically occur in physically active populations. Women have a higher risk of ACL injury than men, but the actual mechanism of this injury is unknown. This study focuses on human movement as a risk factor for ACL injury and combines an epidemiologic prospective cohort design with a biomechanical motion analysis assessment. The subjects in the cohort are female and male cadets and midshipmen at the U.S. Naval Academy, the U.S. Air Force Academy, and the U.S. Military Academy at West Point. Cohort enrollment has been completed, and a total of 5,868 subjects have been enrolled in the cohort (39% are female) and undergone a baseline human movement biomechanical assessment protocol involving a jump-landing task. Data collection for ACL injuries is on-going, and to date the study has registered over 100 injuries. Based on preliminary multivariate Poisson regression models, the rate of ACL injury is higher in those subjects with increased hip adduction angle at initial ground contact. Several ancillary projects in progress extend the work to other lower extremity outcomes (stress fractures and anterior knee pain) that are common in military populations.

Project Period

2005 - 2011

Key Personnel

Stephen W. Marshall, PhD (PI); Darin Padua, PhD, ATC; Anthony Beutler, MD; Sue Wolf, MS; Dean Taylor, MD; William E. Garrett Jr., MD, PhD; Bing Yu, PhD; Kevin Guskiewicz, PhD, ATC; Barry Boden, MD; Scott Pyne, MD; John Tokish, MD; Thomas DeBerardino, MD

Other Organizations or Institutions Represented

Uniformed Services University of the Health Sciences; United States Naval Academy; The Orthopedics Center; United States Air Force Academy; United States Military Academy at West Point

Funding

National Institute for Arthritis, Musculoskeletal, and Skin Disorders; The American Orthopedic Society for Sports Medicine

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Influence of Hamstring Muscle Stiffness on Knee Joint Stability

Anterior cruciate ligament (ACL) injury affects a substantial number of individuals in the U.S. each year, and females demonstrate a substantially greater injury rate than males. Public health initiatives such as Healthy People 2010 promote healthy lifestyles through physical activity. However, population increases in physical activity will likely result in an increase in the rate of musculoskeletal injuries, including those of the ACL. This investigation will evaluate the influence of hamstring stiffness on knee joint stability in 50 males and 50 females. The aims of this project include the following: 1) to evaluate the relationship between hamstring stiffness and sagittal plane knee joint stability; 2) to evaluate sex differences in sagittal plane knee joint stability; and 3) to evaluate the contribution of hamstring muscle stiffness to the sex difference in sagittal plane knee joint stability. Data collection has been completed, as have analysis for Aim 1. We have recently published a peer-reviewed paper (*Clinical Biomechanics* 26(3): 278-283, 2011) that discusses the finding that hamstring stiffness is an important contributor to knee joint stability, and likely to anterior cruciate ligament (ACL) injury risk. Furthermore, hamstring stiffness can be modified via numerous mechanisms, thus these data provide rationale for future interventions designed to enhance hamstring stiffness in an effort to increase knee joint stability and reduce ACL injury risk. These findings are likely to have substantial implications for the public health burden associated with ACL injury, as well as future ACL injury prevention efforts. The investigators have also developed a biomechanical model for predicting strain of the ACL during the selected tasks, and a manuscript describing the model is currently in preparation.

Project Period

2009 - 2011

Key Personnel

J. Troy Blackburn, PhD, ATC (PI); Darin A. Padua, PhD, ATC; Marc F. Norcross, MA, ATC

Funding

UNC-Chapel Hill Award Program for Junior Faculty Development; National Center for Injury Prevention and Control

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Center for the Study of Retired Athletes

Hundreds of professional athletes retire every year, many of whom were forced to abuse their bodies throughout a career that likely caused them to play injured and crippled on occasion. These very same "bodies," which provided an opportunity of a lifetime for some players, are now deteriorating. The Center for the Study of Retired Athletes, housed in the Department of Exercise and Sport Science at UNC-Chapel Hill, was developed in 2000. The primary goals of the Center are to collect epidemiological data on retired professional athletes, and to provide medical care for select retirees in a research setting. The hope is that these research findings will help improve the quality of life for many retired athletes. This information will also be used to prepare active athletes for a healthier retirement. Currently, the Center is conducting two research studies. One explores the relationship between recurrent concussion and hypopituitarism in retired NFL players. The second is examining the effects of Omega-3 fatty acid supplementation in 40 retired NFL players who suffer from memory dysfunction. Three publications from this work are currently under review or in preparation. UNC IPRC assists the Center for the Study of Retired Athletes by providing biostatistical support and participating on the Center's advisory board.

Project Period

2000 - Present

Key Personnel

Kevin Guskiewicz, PhD, ATC (PI); Stephen W. Marshall, PhD

Other Organizations or Institutions Represented

National Football League Players' Association (Washington, DC); John Wayne Cancer Institute at the St. John's Health Center (Santa Barbara, CA); Harbor-UCLA Medical Center (Torrance, CA)

Funding

Office of the UNC Vice Chancellor for Research and Economic Development; Office of the Dean, UNC College of Arts and Sciences; The National Football League Players' Association – Professional Athletes Foundation; Medtronic, Inc; Martek Biosciences Corporation; National Operating Committee on Standards for Athletic Equipment.

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Translating Lower Extremity Injury Prevention into Practice

A critical barrier to progress in community sports injury prevention programs is the lack of “buy-in” from the team coach. Coaches hold the key to effectively reaching players during practice times. Yet injury prevention programs are developed and implemented by researchers without considering the coaches’ perceived barriers to injury prevention implementation. No study conclusively quantifies the effects of coach supervision on injury markers and injury rates.

To address this critical translational gap, this project comparatively studies a proven Lower Extremity Injury Prevention (LEIP) program using the three most common implementation models in community youth sports: program supervision by an outside professional, supervision by a trained coach, and supervision by a coach with access to LEIP program materials only. Based on Fishbein’s reasoned action approach model, the investigators have developed a Coaches’ Behavioral Change Workshop. The workshop will be given to “train coaches” to improve program compliance, a key deficiency in previous coach-led programs. The study team will assess the knowledge, attitudes, and beliefs of youth soccer coaches before and after program implementation. The primary outcome measure of successful implementation will be reductions in lower extremity injury rates. Secondary outcome measures of interest are improvements in balance (measured by Star Excursion Balance Test) and movement patterns which predict injury (measured by the Landing Error Scoring System and by three-dimensional biomechanical analysis). The investigators hypothesize that following the behavioral change workshop, teams supervised by trained coaches will exhibit protective biomechanical changes and reductions in their injury rate similar to teams supervised by trained professionals.

Project Period

2009 - 2011

Key Personnel

Darin A. Padua, PhD, ATC (PI); Stephen W. Marshall, PhD

Funding

UNC Injury Prevention Research Center Faculty Small Grant Program

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BY THE NUMBERS: SPORTS INJURIES

AMERICANS WHO RECEIVE MEDICAL ATTENTION

7 million

FOR SPORTS AND RECREATIONAL INJURIES IN A YEAR

Source: Conn, JM, Annest JL, Gilchrist J. Sports and recreation related injuries in the US population, 1997-99. *Injury Prevention* 2003; 9 (117-123.)

AMERICANS WHO ARE TREATED IN EMERGENCY DEPARTMENTS

4.3 million

FOR SPORTS AND RECREATIONAL INJURIES IN A YEAR

Source: CDC 2000-2001 Morbidity and Mortality Report

PERCENT OF SPINAL CORD INJURIES

12%

RESULTING FROM SPORTS AND RECREATIONAL ACTIVITIES

SOURCE: <http://www.cdc.gov/TraumaticBrainInjury/scifacts.html>

Validity & Reliability of the NCAA Web-Based Injury Surveillance System

The National Collegiate Athletic Association (NCAA) Web-based Injury Surveillance System (ISS) involves hundreds of certified athletic trainers (ATC) in the USA entering injury surveillance data into a web-based system. These data are used by NCAA committees to make decisions relevant to student-athlete welfare and are used by sports medicine researchers around the world. The system is widely regarded as the premier sports injury surveillance system in the world. However, the validity and reliability of these data are currently unknown. This study quantitatively established the reliability and validity of the system. Abstractors visited a sample of 15 schools contributing data to the system and abstracted data on sports-related injuries from sources other than the ISS (hard copy files or other databases). Results indicate that the ISS captures the vast majority of sports injuries (close to 90%) and reliability of most data fields is high (over 90%). A paper reporting the results will be published in the *Journal of Athletic Training*.

Project Period

2006 - 2010

Key Personnel

Stephen Marshall, PhD (PI); Kristen Kucera, PhD, ATC

Other Organizations or Institutions Represented

Duke University Medical Center

Funding

National Collegiate Athletic Association

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Photo by Dan Sears

Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center

The mission of the “Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center” is to improve the prevention, evaluation, management, and rehabilitation of sports-related traumatic brain injuries through research, education, and clinical practice. The Center is under the sponsorship of the University of North Carolina at Chapel Hill’s Department of Exercise and Sport Science, in collaboration with several other units, including the UNC Injury Prevention Research Center, UNC School of Medicine, UNC Gillings School of Global Public Health, and UNC Division of Sports Medicine. The Center’s research team also collaborates with concussion experts world-wide to carry out its mission. Through clinical and research initiatives, the Center’s faculty and staff demonstrate a commitment to providing the highest level of care for athletes of all ages suffering from sports-related brain injuries, and to assist parents, coaches, and medical professionals in managing these student-athletes.

The Center carries out its mission through a values-based clinical and research agenda. The program guides clinicians to better manage sports-related concussions and traumatic brain injury and apply the values of:

- Injury prevention
- Injury surveillance
- Education
- Evaluation
- Management
- Rehabilitation
- Collaboration
- Integrity & Responsibility

The Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center is housed in a newly renovated 1,300 sq. ft. space on the top floor of the Stallings-Evans Sports Medicine Center in the heart of UNC-Chapel Hill’s campus. It is a center of excellence for treating athletes suffering from sport-related concussion. This dedicated clinical research space offers state-of-the-art balance assessment, neuropsychological assessment, and other neurological evaluations. The close proximity to the main floor of the UNC Athletic Training Room in Stallings-Evans is ideal for treating collegiate athletes, as well as recreational and high school athletes from the surrounding communities. The Center also serves as an evaluation and treatment facility for UNC’s well-known Center for the Study of Retired Athletes, aimed at investigating a spectrum of physical and mental challenges facing former NFL players.

UNC is well recognized nationally and internationally as a research leader focusing on the prevention and management of these often debilitating and potentially catastrophic brain injuries. Our work over the past 16 years has been conducted out of the Sports Medicine Research Laboratory and we have used this time to form a qualified and highly respected interdisciplinary research team, consisting of neuroscientists, physicians, certified athletic trainers, and injury epidemiologists. The newly named Center allows for Carolina to continue its tradition of excellence in an environment that promotes collaboration between clinicians and researchers with a more clear vision and identity. Ultimately, the major benefactors are the young athletes participating in sports who are at risk for these injuries.

Key Personnel

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Other Organizations or Institutions Represented

UNC Sport Medicine Research Lab; Center for the Study of Retired Athletes; Matthew Gfeller Foundation; UNC Neuromuscular Research Lab; National Center for Catastrophic Injury Research

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Other Unintentional Injury

FEATURED PROJECT

- The Effect of a Driver Training Course on the Incidence of Moving Violations and Traffic Crashes after the Course 29
- Pedestrian Injuries and the Built Environment in Colombia 30
 - Integrating Qualitative and Quantitative Methods in Longitudinal Measurement and Analysis 30





While the work of the UNC IPRC is largely characterized by a focus on the four injury areas of violence, residential injury, sports and recreational injury and occupational injury, we also are engaged in cross-cutting research that extends beyond these four content areas. Studies of the built environment, safe transportation, motor vehicle crashes and data management are yielding important findings that help build the field while addressing major injury problems of our time.

FEATURED PROJECT

The Effect of a Driver Training Course on the Incidence of Moving Violations and Traffic Crashes after the Course

The purpose of this project was to evaluate the effect of a driver training course implemented in Pitt County, North Carolina. The effect of this strategy on the incidence of re-offending as expressed by new moving violations or crashes over a period of two years after the intervention is also being evaluated.

Project Period

2009 - Present

Key Personnel

Herbert G. Garrison MD, MPH (PI); Andrés Villaveces MD, PhD; Jennifer P. King MA; Jennifer L. Smith MSW; J. Michael Bowling PhD; Eric A. Rodgman MPH

Other Organizations or Institutions Represented

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Funding

National Center for Injury Prevention and Control

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Pedestrian Injuries and the Built Environment in Colombia

Consideration of the built environment and its influence on injury has become increasingly highlighted in injury prevention work. The purpose of this project is to conduct a pilot study of the built environment in a metropolitan area of a middle-income country (Cali, Colombia), and to study its influence on the incidence of pedestrian-related deaths at an ecological level. This will be accomplished by using aggregate measures of the built environment and city infrastructure and evaluating their spatiotemporal association with mortality data on overall injuries while focusing on structural inequalities. Injury mortality data collection on pedestrian fatal injuries was completed in 2010. Geographic information about population data sources was completed in 2008. Funding from the UNC Office of the Provost and the University Research Council enabled acquisition of better maps for spatial analyses.

Project Period

2007 - 2011

Key Personnel

Andrés Villaveces, MD, PhD (PI); Daniel Rodriguez, PhD; Stephen Lippmann, MPH; Shrikant I Bangdiwala, PhD; Stephen W. Marshall, PhD; Marc Serre, PhD.

Other Organizations or Institutions Represented

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Funding

National Institutes of Health, Fogarty International Center; University Research Council; UNC Office of the Provost; National Center for Injury Prevention and Control

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Integrating Qualitative and Quantitative Methods in Longitudinal Measurement and Analysis

The mission of the Family Life Project is to better understand how child characteristics, family life, and community support interact and contribute to the growth and development of young children. This sub-study of the Family Life Project seeks to use innovative ways of combining quantitative and qualitative methods to examine child injury. This sub-study has resulted in one completed manuscript and another published in *Pediatrics* in 2008.

Project Period

2006 - 2007

Key Personnel

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Other Organizations or Institutions Represented

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Funding

Maternal and Child Health Bureau

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Residential Injury

Most unintentional injuries, such as burns, drownings and falls, occur in a residential setting. Older adults face a high risk of falls, the leading cause of injury in adults over age 65. New interventions to prevent falls can address the disproportionate impact falls pose to these older populations.¹ Drug poisoning causes nearly 28,000 deaths annually in the U.S. and has become the 2nd leading cause of injury death in the U.S., second only to traffic injuries, and the leading cause of injury death for adults age 35-54.¹ Prescription opioids are the most common cause of unintentional overdose, and account for more deaths than heroin and cocaine combined.^{2,3} Research at UNC IPRC has focused on this dramatic and recent epidemic.

Preventing Falls Through Enhanced Pharmaceutical Care

This study evaluated the effectiveness of a community-based falls prevention program delivered by community pharmacists. A randomized controlled clinical trial design was used. The target population was community-dwelling older adults (age 65+) at high risk for future falls because 1) they had experienced a fall within the past year, 2) they were currently using four or more prescription medications, and 3) they were currently using at least one CNS-active medication. Participants were recruited using prescription profile records maintained by the pharmacies where they obtain their medications. Individuals in the intervention group received an in-depth consultation concerning their current medications, conducted by a community pharmacist. The consultation was designed to elicit medication-related problems (e.g., orthostatic hypotension, daytime sedation). Problems identified during the consultation, and therapeutic recommendations designed to address these problems, were communicated to the prescribing physician as well as the patient's primary physician. With physician approval, appropriate modifications were made to the patient's medication regimen. Individuals assigned to the Control Group received written information about falls prevention. All individuals were followed for one year. Data concerning falls were collected via Monthly Falls Calendars. Data concerning medication use were collected quarterly via a combination of self-report and review of participants' pharmacy prescription profile records. One year following study enrollment, more comprehensive follow-up data were collected. To date, this project has succeeded in identifying older adults at increased risk of falling via review of prescription profile records. The findings demonstrate the feasibility of using community pharmacies to deliver a falls prevention program targeting older adults who are taking medications that have been associated with an increased risk of falling. Two peer reviewed papers have been published using this data and a third has been submitted.

Project Period

2004 – 2009

Key Personnel

Susan J. Blalock, MPH, PhD (PI); Mary Roth, MHS, PharmD; Stefanie Ferreri, PharmD; Carri Casteel, PhD, MPH; Karen Demby, PhD; Cathleen Colón-Emeric, MD, EHSc; Joseph T. Hanlon, PhD; Carol Hogue, PhD

Other Organizations or Institutions Represented

Duke University Medical Center; University of Minnesota; University of Pittsburgh

Funding

National Center for Injury Prevention and Control

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Violence

CHILD MALTREATMENT

FEATURED PROJECT

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SUICIDE & HOMICIDE

FEATURED PROJECT

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Alcohol Sales Laws and Homicide Injuries in Cali, Colombia 45

North Carolina Violent Death Reporting System (NC-VDRS) 45



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FEATURED PROJECT

Longitudinal Studies of Child Abuse and Neglect

This multi-site longitudinal study of 1354 participants is designed to: 1) examine the impact of child abuse and neglect on young children at five sites (North Carolina, San Diego, Seattle, Chicago, and Baltimore) over a twenty-year period; 2) examine the extent to which children are victimized throughout their lifetimes; 3) identify the factors that increase the likelihood a child will experience chronic and severe abuse; 4) determine what life experiences exacerbate or ameliorate the negative impact of maltreatment; and 5) determine factors that might contribute to resilience in vulnerable children. The study sites follow a common protocol for data collection that includes face-to-face interviews with children and their primary caregivers at the time the children are 4, 6, 8, 12, 16, and 18 years old. Additional data sources include teacher questionnaires and CPS records.

In December 2010, the LONGSCAN Investigators received approval for additional funding from the Doris Duke Charitable Foundation to support *From Science to Practice: LONGSCAN Findings that Can Change Child Welfare*. This three-year project, starting in 2011, will support continuing analysis of the LONGSCAN data, as well as dissemination meetings and the writing of findings summaries for child welfare practitioners and policy makers.

To date, LONGSCAN investigators and other researchers using LONGSCAN data have published 130 peer-reviewed journal articles which have made significant contributions to the child maltreatment literature in the areas of defining and measuring maltreatment, ethical issues related to conducting child maltreatment research, risk and protective factors, the role of fathers in the lives of maltreated children, the interface of child maltreatment with other interpersonal violence exposure, suicidality, and the effects of early childhood maltreatment on later physical health. Please visit <http://www.iprc.unc.edu/longscan/> for more information.

Project Period

2005 - 2011

Key Personnel

Desmond Runyan, MD, DrPH (PI); Mark Everson, PhD; Jonathan Kotch, MD, MPH; Jon Hussey, PhD; Shrikant Bangdiwala, PhD; Terri Lewis, PhD; Richard Thompson, PhD; Alan Litrownik, PhD; Rae Newton, PhD; Howard Dubowitz, MD; Maureen Black, PhD; Diana English, PhD; Elizabeth Dawes Knight, MSW; Jamie Smith, MA; Lynn Martin, MS

Other Organizations or Institutions Represented

Juvenile Protective Association of Chicago; San Diego State University; University of Washington; University of Maryland at Baltimore; Washington State Department of Health and Social Services

Funding

Administration on Children, Youth and Families; Office of Child Abuse and Neglect; Doris Duke Charitable Foundation

Contact

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Child Maltreatment

The Period of PURPLE Crying®: Keeping Babies Safe in North Carolina

Abusive Head Trauma in infants, or Shaken Baby Syndrome, is a leading cause of infant mortality in the U.S. Some work has been done to develop educational interventions for new parents to eliminate this threat to infant well-being. No rigorous evaluation of the effectiveness of these programs has been undertaken, although some estimate that more than 58% of new parents in the U.S. received some form of this educational intervention in 2007. In partnership with other organizations, UNC IPRC is fielding a study of the effectiveness of educating new parents about shaking and how to respond to infant crying. Over 5 years, this effort is intended to reach the parents of over 600,000 new babies. This project also will develop and test a media campaign and provide the materials to be distributed to these households.

Project Period

2007 - 2012

Key Personnel

Desmond Runyan, MD, DrPH (PI); Adam Zolotor, MD, MPH; Maryalice Nocera, MSN; Robert Murphy, PhD; Marilyn Barr, BA; Ronald Barr, MD, MPH; Frederick Rivara, MD, MPH; Heather Keenan, MDCM, PhD.

Other Organizations or Institutions Represented

National Center on Shaken Baby Syndrome; Center for Child and Family Health; North Carolina Partnership for Children; North Carolina Division of Health; Prevent Child Abuse North Carolina; Smart Start (North Carolina); University of Utah Health Sciences Center; University of Washington; University of British Columbia (Canada)

Funding

Centers for Disease Control and Prevention; The Duke Endowment (through the Center for Child and Family Health); Doris Duke Charitable Foundation

Contact

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PREVENT Child Maltreatment (CMT) Institute

This project built on the UNC IPRC's twenty year history of leadership in conducting internationally recognized injury and violence research and developing strategies that bridge research to practice. PREVENT's CMT Institute is a training effort that aims to expand national capacity to address the primary prevention of child maltreatment. The training uses action learning techniques to enhance the ability of participants to conduct evidence-based child maltreatment interventions, assess their impacts, and continuously improve the quality of their organizations' approaches to primary prevention. Project goals were to: 1) build organizational, community, state and national capacity in primary prevention of violence through effective training of child maltreatment leaders, frontline professionals, and community partners; 2) prevent injuries resulting from violence against children by developing and implementing child maltreatment prevention programs; and 3) facilitate collaboration of injury and violence prevention practitioners across disciplines, settings and types of populations served. In 2010 the team developed a short video and series of case studies to describe the program and the work that participating teams have done to apply the skills learned in the training, and select teams received monthly telephone coaching. For success stories from the PREVENT Institute, please visit <http://www.prevent.unc.edu/successstories/>.

Project Period

2008 - 2010

Key Personnel

Carol Runyan, PhD, MPH (PI); Desmond Runyan, MD, PhD; Andrés Villaveces, MD, PhD; Karen Strazza Moore, MPH; J'Ingrid Mathis, MS; Elizabeth Dawes Knight, MSW; Mariana Garrettson, MPH; David Hollar, PhD

Funding

Doris Duke Charitable Foundation

Contact

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Using Cell and Internet-Based Technology to Promote Social Support Among Pregnant and Parenting Teens: PROJECT SMARTPHONE

Child abuse occurs at epidemic proportions in the US, and the children of adolescent mothers are at the greatest risk. A variety of evidence-based and best-practice interventions to nurture safe and supportive families and prevent maltreatment have been developed. However, enrollment and engagement in these interventions continues to be a challenge, and attrition rates are often high. Furthermore, program effects are often small and hard to replicate, and many programs are enormously expensive to implement. Mobile technologies have been increasingly utilized in health promotion programs and have been shown to be successful for a variety of conditions. The application of mobile technologies to child maltreatment prevention has been limited. Poor social support has been repeatedly shown to be a risk factor for child maltreatment. This pilot study will utilize Facebook groups and group cell texting to engage pregnant and parenting adolescent mothers around the challenges of pregnancy and parenting, and to promote social support among group members. The primary outcome of interest will be perceived social support, and secondary outcomes will include knowledge of infant development, parenting self-efficacy, parenting beliefs, and effective contraceptive use. The pilot is also designed to build collaborative capacity between UNC researchers, the Adolescent Pregnancy Prevention Campaign of North Carolina, and local adolescent parenting programs.

Project Period

2010 - 2011

Key Personnel

Adam Zolotor, MD, MPH (PI); Desmond Runyan, MD, DrPH; Heidi Hennik Kaminski, PhD, Terri Lewis, PhD; Elizabeth Dawes Knight, MSW

Other Organizations or Institutions Represented

Adolescent Pregnancy Prevention Campaign of North Carolina; Adolescent Parenting Programs in Guilford, Orange, and Durham, NC Counties

Funding

North Carolina Translational and Clinical Sciences Institute

Contact

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Formative Evaluation of The Circle of Parents® Program in North Carolina

Circle of Parents is a nationally utilized, well-respected parent mutual support and empowerment intervention with promising but limited scientific evidence of effectiveness. This formative evaluation study, in partnership with Prevent Child Abuse North Carolina (PCANC), seeks to meet four primary aims in response to the need for further evaluation of the Circle of Parents® programming in NC:

- 1) enhance understanding of current implementation practices throughout the state;
- 2) assess the association between implementation practices, parent retention rates and parents' self-reported social support, use of positive or negative parenting practices, and use of community resources;
- 3) develop recommendations as to how PCANC can enhance and standardize process and outcome data collection protocols;
- 4) develop strategies designed to overcome ethical and methodological challenges related to implementing a rigorous evaluation of Circle of Parents®, and build the trusting relationships with Circle of Parents® programs around the state that constitute a prerequisite to such an evaluation.

Project Period

2010 - 2011

Key Personnel

Elizabeth Dawes Knight, MSW (PI); Erica Lane; Meghan Shanahan, PhD; Molly Berkhoff, MD, MPH; Mariana Garretson, MPH; Christopher Ringwalt, DrPH

Other Organizations or Institutions Represented

Prevent Child Abuse North Carolina; North Carolina's Circle of Parents® affiliate programs

Funding

UNC Injury Prevention Research Center Small Faculty Grant

Contact

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Oral Trauma in Infant Victims of Abusive Head Trauma

Oro-pharyngeal injuries are commonly described in child victims of physical abuse. Several case series of abused children examined by dentists have described the type of oral injuries most commonly seen among both inpatient and outpatient cases. Understanding the specificity and positive predictive value of this and other oro-pharyngeal injuries is critical for primary care physicians seeing children with this seemingly trivial injury. This project leverages an existing prospective study of children under two admitted to intensive care units or with fatal head injuries in North Carolina which is part of an evaluation of an abusive head trauma prevention program. Each infant seven months and under admitted to the UNC medical center's intensive care unit with abusive head trauma or non-intentional head trauma or with a fatal head injury examined in our medical examiner's office will receive a comprehensive dental exam by a pediatric dentist. This prospective cohort study of infants with serious head injuries allows a nearly perfect comparison group to better understand the association between oro-pharyngeal injuries and abuse. If this study supports our hypothesis, it will provide critical information to family physicians seeing babies with this seemingly mild injury.

Project Period

2009 - 2012

Key Personnel

Adam Zolotor, MD, MPH (PI); Desmond Runyan, MD, DrPH; Rocio Quinonez, DMD, MPH; Michael Milano, DMD; Mary-Alice Nocera, MSN, RN

Funding

American Academy of Family Physicians

Contact

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International Society for the Prevention of Child Abuse and Neglect Child Abuse Screening Tool

An international team of researchers in child maltreatment prevention, led by IPRC Core faculty Desmond Runyan and Adam Zolotor, developed the ISPCAN Child Abuse Screening Tool (ICAST), a child abuse screening tool that allows lower- to middle income countries to collect data on violence against children to drive policy and monitor policy effectiveness over time.

Key Personnel

Desmond K. Runyan, MD, Dr PH; Adam Zolotor, MD, MPH

Other Organizations or Institutions Represented

The International Society for the Prevention of Child Abuse and Neglect; United Nations Children's Fund; Queensland University of Technology.

Funding

International Society for the Prevention of Child Abuse and Neglect (ISPCAN)

Contact

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Global Symposium for Examining the Relationship between Online and Offline Offenses and Preventing the Sexual Exploitation of Children

In April 2009, UNC IPRC, in collaboration with the U.S. Department of Justice, hosted an international symposium addressing the scope of child sexual abuse and exploitative practices both online and offline, and identifying strategies for protecting children in online and offline environments. The symposium involved experts in the areas of criminal justice, sexual behavior, and applied psychology from the G8 countries (Canada, France, Germany, Italy, Japan, Russia, UK, US) and beyond. As a result of the symposium, a G8 ministerial declaration on child pornography was issued (see <http://www.iprc.unc.edu/report.shtml>). The project team is planning to publish the symposium findings.

Project Period

2008 - 2011

Key Personnel

Kurt M. Ribisl, PhD (PI); Ethel Quayle, PhD; Andrew Oosterbaan, JD; Sharon Cooper, MD, FAAP; Anitha Ibrahim, JD; J'Ingrid Mathis, MS; Sharon Berlin

Other Organizations or Institutions Represented

U.S. Department of Justice; University of Edinburgh (Scotland)

Funding

U.S. Department of Justice

Contact

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Violence Exposure Trajectories and HIV/AIDS Risk Behavior among Maltreated Youth and “Lighthouse: Guiding Maltreated Youth and their Families through the Transition to Adolescence”

Adolescent exposure to violence, either as a witness or victim, is increasingly common or has been associated with a wide range of negative outcomes for youth, including increased likelihood of engaging in HIV/AIDS risk behaviors. This study will utilize advances in quantitative methods in combination with the methodological rigor of the Longitudinal Studies of Child Abuse and Neglect (LONGSCAN). The specific aims of this study are to: 1) examine the exposure to sexual abuse, family violence, and community violence among youth in LONGSCAN, the link between trajectories of youth violence exposure and HIV/AIDS risk behaviors, and contextual moderators of these behaviors; 2) use findings from the LONGSCAN analyses along with family and practitioner feedback to guide the development of a family-based HIV/AIDS prevention program for youth with violence exposure histories; 3) use study findings, and the associated prevention manual to serve as the pilot data for other research. Consistent with Aim 1, findings revealed that sexual abuse trajectories across childhood were associated with HIV/AIDS in adolescence and that the findings were consistent with both boys and girls (Jones, Runyan, Lewis, Litrownick, Black, Wiley, English, Proctor, Jones, & Nagin, 2010); however, findings suggested that the effects of sexual abuse had to be interpreted in the context of other types of abuse and violence exposure as well. Year 2 focus group findings revealed the following: 1) both parents and youth recognize the importance of communicating about the risks associated with the transition to adolescence; 2) however, families of youth with sexual abuse histories do not seem to identify sexual abuse as a vulnerability for increased risk behavior during the adolescent transition; and 3) families are looking for avenues to raise conversations about the adolescent transition with youth, but often rely on youth or media (e.g., television shows) as prompts. Consistent with Year 3 aims, the PI developed an innovative HIV/AIDS prevention program for youth with sexual abuse histories and their families. “Lighthouse: Guiding Maltreated Youth and their Families

through the Transition to Adolescence”, is a brief (7 session), family-focused, strengths-based program designed to reduce the vulnerability for risky behavior among youth with sexual abuse histories by providing youth and families who have completed trauma-focused programs (e.g., Trauma-Focused Cognitive Behavioral Therapy; TF-CBT; Cohen, Mannarino, & Deblinger, 2006) with the support, skills, and opportunities to identify and build upon adolescent and family strengths. Consistent with a call for children and families to have a voice in programming (National Federation of Families for Children’s Mental Health, 2008), LIGHTHOUSE was developed in collaboration with clinicians and researchers who work with maltreated youth and their families, as well as a focus group of both adults and children with maltreatment histories and their non-perpetrating caregivers. Specifically, LIGHTHOUSE aims to identify and reshape the cognitions and attitudes stemming from sexual abuse that increase vulnerability for later risky behavior by identifying and building upon child and family strengths and competencies.

Project Period

2007 - 2011

Key Personnel

Deborah Jones, PhD (PI); Desmond K. Runyan, MD, DrPH; Seth Kalichman, PhD; Daniel Nagin, PhD

Other Organizations or Institutions Represented:

University of Connecticut; Carnegie Mellon University

Funding

Centers for Disease Control and Prevention (K award)

Contact

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“Initial findings revealed that for both girls and boys, sexual abuse trajectories across childhood were associated with risky behaviors in adolescence” – Dr. Deborah Jones



The Violence Problem

A crucial mission of Public Health practitioners and researchers around the world is the abolition of health disparities, and violent injury dramatically affects young males, racial minorities and those who are poor, mediating further disparities between communities. 51,000 violent deaths occur in the U.S. every year, with over 18,000 homicides and 34,000 suicides. Sexual violence is a key women's health issue, and the 3rd leading cause of violent injury in women of all ages.^{1,2} In the U.S. alone, an estimated 772,000 cases of child maltreatment occur annually, with the highest incidence among racial minorities and infants. Maltreatment was responsible for 1,740 deaths in 2008 alone.³ UNC IPRC is committed to innovation in child maltreatment and intimate partner violence prevention.

Youth Violence

Homicide is the 2nd leading cause of death for 10 to 24 year-olds. In 2007, 5,764 young people were murdered, an average of 16 a day. The homicide rate for young African-American males is 17 times higher than the same rate in White males, highlighting the disproportionate impact of youth violence among racial minorities.⁴ More than 656,000 young people require medical attention for nonfatal injuries every year. A 2009 survey reported that 31.5% of grade 9-12 youths had been in a fight in the last year, 7.7% reported being threatened or injured with a weapon on school property at least once in the last year, and almost 20% reported being bullied on school property in the last year.^{5,6}

Youth Violence

North Carolina Academic Center for Excellence in Youth Violence Prevention: NC-ACE

North Carolina Academic Center for Excellence in Youth Violence Prevention, known as the NC-ACE, is the nation's first rural Youth Violence Prevention Center and serves Robeson County, one of the most ethnically diverse rural counties in the United States, and a county severely affected by ongoing economic struggles precipitated in part by the loss of thousands of manufacturing jobs. Led by UNC School of Social Work Professor Paul Smokowski, PhD, the Center is a collaborative partnership between the UNC School of Social Work, the UNC Injury Prevention Research Center, and community partners in Robeson County, including the Robeson County Health Department, the nonprofit Center for Community Action, and Public Schools of Robeson County. The five-year project will include the establishment of the Center to provide community support and solutions for preventing youth violence. Evaluation activities include tracking community and school rates of violence in the County, and following the health and development of 3,000 Robeson County middle school students and a comparison group of 2,000 students from a nearby county. Middle school was chosen as the optimal age for intervention as it should allow the team to reach and affect students before problems related to violence become entrenched. The Center joins three existing Centers, which were established by the Centers for Disease Control and Prevention's National Center for Injury Control and Prevention following the shootings at Columbine High School. Please visit <https://ncace.web.unc.edu/> for more information.

Project Period
2010 - 2015

Key Personnel
Paul Smokowski, PhD (PI); Natasha K. Bowen, Ph.D.; Shenyang Guo, PhD., Dean Duncan, PhD; Rev. Mac Legerton; Martica Bacallao, PhD; Jim Barbee

Other Organizations or Institutions Represented
Robeson County Health Department; Public Schools of Robeson County; Robeson County Juvenile Courts; Center for Community Action; UNC Pembroke; UNC Greensboro

Funding
National Center for Injury Prevention and Control

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Do Criminal Background Checks Improve Safety on College Campuses? A Feasibility Study

The Campus Safety Project is a feasibility study aimed at understanding whether colleges can identify potentially dangerous students by running criminal background checks on applicants. It includes a pilot case-control study to generate preliminary data on whether students who have criminal records before coming to college are more likely to engage in misconduct during college than students who do not have criminal records before coming to college, coupled with a survey about student misconduct during and before college. Finally, in order to understand how criminal background checks fit into colleges' overall safety strategies, researchers will survey a national sample of college administrators about criminal background checks and other safety interventions.

Project Period
2009 - 2011

Key Personnel
Carol W. Runyan, PhD, MPH (PI); Matthew W. Pierce, JD, MPH; Shrikant Bangdiwala, PhD

Funding
Centers for Disease Control and Prevention

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FEATURED PROJECT

Family-Based Dating Violence Prevention for Latino Teens

Latino teens are at increased risk for dating abuse victimization and perpetration, yet very few dating violence prevention programs have been developed specifically for them and their culture. This multi-phased project combines translational research with developmental and intervention research. For the translational phase we will adapt our evaluated family-based dating abuse prevention program, *Families for Safe Dates*, to be culturally appropriate for Latino families (Aim 1). We will also culturally adapt data collection instruments that will be used in a randomized trial of the program for Latino parents/caregivers and teens (Aim 2). After completion of the program and data collection adaptation phases, a randomized controlled trial will be conducted with Latino families to assess the efficacy of the program on proposed theoretically-based mediating variables related to the primary prevention of dating abuse (Aim 3). Thus far, the formative research for Aim 1 has included the conduct of 24 focus groups with Latino caregivers and teens. Findings from this formative research were used to develop the program called "NOVIOLencia: Preparing our teens for healthy and safe dating" which includes 6 booklets of interactive activities for Latino caregivers to do with their teens. Feedback on these 6 booklets will be obtained through additional up-coming focus groups. For Aim 2, cognitive interviews about data

collection instruments have been conducted with 20 Latino caregivers and 18 Latino teens. Data collection instruments are being revised based on this feedback and more cognitive interviews will be conducted on the revised instruments. Recruitment of Latino families for the randomized trial (Aim 3) will begin July 2011.

Project Period

2009 - 2014

Key Personnel

Vangie Foshee, PhD (PI); Mimi Chapman, MSW, PhD; Susan Ennett, MSPH, PhD; Luz McNaughton Reyes, MPH, PhD; Paula Gildner, MPH

Funding

National Center for Injury Prevention and Control

Contact

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Evaluation of One Act: A UNC Campus Bystander Intervention Initiative

Sexual violence prevention efforts have long focused on addressing potential perpetrators and victims and changing their attitudes, beliefs and behaviors. Increasingly experts in the field are promoting the idea of bystander intervention, in which witnesses to an interaction that seems like it may lead to an abusive interaction have the skills and confidence to step in and act to change the eventual outcomes. The Interpersonal Violence Prevention Coordinator for UNC-Chapel Hill and students across campus have reviewed many prominent bystander intervention programs, and subsequently developed a training curriculum that they believe will be the most effective on this university campus. It is called One Act because it encourages students to take at least one prosocial action to change the norms on campus around parties, alcohol use, dating relationships, and sexual violence. They are also developing a campus wide social marketing campaign to support the messages from the training. This study is supporting several phases of the program planning and evaluation of this effort, including process evaluation, evaluation of short term impacts on training participants, and assessing campus-wide social norms change from the trainings and the media campaign.

Project Period

2010 - Present

Key Personnel

Mariana Garrettson, MPH (PI); Erica Lane; Robert Pleasants, PhD; Kelli Raker, MSW

Funding

UNC-Chapel Hill Student Campus Safety Committee & UNC Injury Prevention Research Center

Contact:

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Understanding the Role of Substance Use in Intimate Partner Violence

Intimate partner violence (IPV) during and after pregnancy is associated with harmful maternal, fetal, and neonatal outcomes and is a leading cause of pregnancy-related death. This investigation aims to (1) consider the ecological relationship between alcohol control policies and female homicide victimization rates at the state level, as an indicator of the prevalence of intimate partner violence; (2) examine the differential roles of paternal and maternal substance use in intimate partner violence in families with young children (under the age of five); and (3) evaluate the relative importance of individual socio-demographic (e.g., race-ethnicity, nativity, and education) and neighborhood contextual-level factors (e.g. alcohol prices, taxation, and availability; and social acceptability) in explaining the occurrence of intimate partner violence during and after pregnancy and the relationship between substance use and intimate partner violence.

Project Period

2009 - 2011

Key Personnel

Krista Perreira, PhD (PI); Christine Durrance, PhD; Shelley Golden, MPH

Funding

Centers for Disease Control and Prevention

Contact:

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Dating Abuse Prevention in Teens of Moms with Domestic Violence Protection Orders

Approximately 15 million children are exposed to domestic violence every year. Identifying effective programs for preventing adolescent dating violence among these high-risk adolescents is one way of breaking the cycle of family violence. The aims of this research are to: 1) develop an intervention to prevent dating abuse in 12 to 15 year old teens exposed to domestic violence; and 2) conduct a small randomized trial to pilot test the procedures that would be used in a future, larger randomized trial to test program efficacy. The formative research for Aim 1 is now completed, and included the conduct of 12 focus groups and 107 interviews with mothers who had been victims of domestic violence and their teens. The finalized program, based on the findings from this formative research, is called *Moms and Teens for Safe Dates* and includes 6 booklets of interactive activities for formerly abused mothers to do with their teens. The pilot randomized controlled trial for Aim 2 is also almost completed. For this study, 51 additional mothers who had been victims of domestic violence, but who no longer lived with the abuser, and their teens completed baseline interviews assessing dating abuse outcomes and hypothesized theoretically-based mediators and moderators of program effects and were randomly allocated to one of three intervention conditions. One-month follow-up data are currently being collected from these mothers and teens. The findings from this study informed the development of a randomized efficacy trial of *Moms and Teens for Safe Dates* that was funded by the CDC on August 1, 2010.

Project Period
2008 - 2011

Key Personnel
Vangie Foshee, PhD (PI); J. Michael Bowling, PhD; Susan Ennett, MSPH, PhD; Kathryn E. Moracco, PhD; Kimberly Dixon, MSW

Funding
US Department of Justice

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Evaluation of Implementation and Adoption of Close to Home, a Community Mobilization Domestic Violence Prevention Program

Founded in 2002 by a small group of community residents in Dorchester, MA, Close to Home has pioneered the use of community mobilization strategies to foster community-wide responsibility to prevent domestic and sexual violence. By combining expertise in domestic and sexual violence with expertise in community organizing, Close to Home draws attention to a public health problem that is often considered a private matter rather than part of public life, and it engages *all* community members in developing and implementing solutions.

Funding from Jane's Trust and the Massachusetts State Legislature allowed for this innovative model to be implemented in three pilot sites in MA. The goal of this study is to assess facilitators and barriers that have lead to variation in the extent of implementation of the model at the three sites. In addition, this study is assessing fidelity of pilot agency activities to the model. The results from this study will be used to guide future implementation efforts of this model of primary prevention of domestic violence.

Project Period
2010 - 2011

Key Personnel
Mariana Garrettson, MPH (PI)

Other Organizations or Institutions Represented
Close to Home

Funding
Robert Wood Johnson Foundation

Contact
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"Preventing this high-risk group of teens from becoming involved in dating abuse is one important way of breaking the cycle of family violence that is linked to many of our social and public health problems." - Dr. Vangie Foshee



Suicide & Homicide

Photo by iStockPhoto

FEATURED PROJECT

Evaluation of NCDHHS Statewide Suicide Prevention Initiative

This project is evaluating aspects of the North Carolina Department of Health and Human Services' youth suicide prevention program which is focused on increasing capacity in the state to identify youth at risk for suicide and to link them with mental health treatment through training and technical support of school personnel. The effort includes three components: 1) development of a communications campaign intended to increase help seeking behavior and reduce suicidal behavior of youth; 2) delivery of gatekeeper suicide prevention training to select school personnel with the intent of increasing the skills of adults who work with youth to recognize warning signs and respond appropriately when youth are at risk of suicidal behavior; and 3) implementation of a school-based student suicide prevention curriculum to juvenile justice health education teachers as well as to physical education and health education teachers. UNC IPRC is evaluating the second program component—gatekeeper suicide prevention training delivered to select school personnel. The delivery of this gatekeeper training includes both a training for trainers (T4T) as well as training sessions directed specifically to school personnel.

Project Period

2008 - 2011

Key Personnel

Carol W. Runyan, PhD, MPH (PI); Susan Ennett, MSPH, PhD; Lawrence Scholl, MPH; J'Ingrid Mathis, MS; Karen Moore, MPH; Lynn Martin, MS

Other Organizations or Institutions Represented

North Carolina Department of Health and Human Services, Division of Public Health, Injury and Violence Prevention branch.

Funding

Substance Abuse and Mental Health Services Agency (SAMHSA) through the NC Department of Health and Human Services

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Alcohol Sales Laws and Homicide Injuries in Cali, Colombia

The purpose of this project is to evaluate the effects of policies determining citywide bar closure times at three different hours of the day (2:00AM, 3:00AM, and 4:00AM), and their association with homicide and unintentional injuries in Cali, Colombia, over a period of three years. Analyses of these data were conducted using time-series analysis techniques and regression models for count data. A manuscript with results has been submitted.

Project Period

2009 - Present

Key Personnel

Alvaro Sánchez Ortíz MD, MPH (PI); Andrés Villaveces, MD, PhD

Other Organizations or Institutions Represented

University of Pittsburgh

Funding

Fogarty International Center – (NIH); National Center for Injury Prevention and Control

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North Carolina Violent Death Reporting System (NC-VDRS)

Steve Marshall acts as an advisor to the North Carolina Violent Death Reporting System. Dr. Marshall has been involved with the system since its inception in 2004. The NC-VDRS is conducted by the Injury and Violence Prevention Branch at the North Carolina Department of Health and Human Services. NC-VDRS is a surveillance system for suicide and homicide in NC. It is one of 17 states funded by the CDC to collect VDRS data. For more information, visit: <http://www.injuryfreenc.ncdhhs.gov/DataSurveillance/ViolentDeathData.htm>

Key Personnel

Steve Marshall, PhD; Sandra Martin, PhD; Anna Waller, ScD. NC-VDRS personnel : Scott Proescholdbell, MPH; Tammy Norwood, Injury and Violence Prevention Branch, NC DHHS; Tamera Coyne-Beasley, MD, MPH; Sandra Martin, PhD

Other Organizations or Institutions Represented

Injury and Violence Prevention Branch, North Carolina Department of Health and Human Services

Contact

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In February 2010, IPRC launched a new Core in Evaluation and Dissemination to build on and expand IPRC's long standing expertise in evaluation and dissemination research.

The mission of the evaluation and dissemination core is to develop and promote the use of evidence-based injury and violence prevention strategies. We provide services to those doing injury and violence research aimed at identifying best/promising practices and to those using scientific research and program evaluation to ensure they are implementing the highest quality prevention programs possible. We aim to expand the range of evaluation research that is happening at the Center and increase the capacity of our injury partners to be able to evaluate their efforts. The evaluation core is led by Mariana Garrettson, MPH. Dr. Christopher Ringwalt, DrPH is the senior evaluation research scientist for the core. Dr. Ringwalt has 20 years of experience in the design, development, analysis, and reporting of epidemiological, etiological, and evaluation studies relating to public health issues. His research interests have focused primarily on the prevention of adolescent and adult risk behaviors, particularly alcohol, tobacco, and other drug use. Among numerous other projects, Dr. Ringwalt has directed evaluations of the Drug Abuse Resistance Education (DARE) Program for the National Institute on Drug Abuse and the National Institute of Justice, and has served as the Senior Evaluator for the Southeast Center for the Application of Prevention Technology. He has been responsible for translational research, and large randomized controlled trials of Projects SUCCESS and ALERT with support from the Office of Juvenile Justice and Delinquency Prevention and also evaluated Project Success for the Chicago Public Schools. Also serving in the evaluation and dissemination core are Meghan Shanahan, PhD, a postdoctoral associate and Lynn Martin, MS, a senior project manager.

The Core launched outreach efforts to both injury researchers and practitioners to understand their resources and needs around evaluation and dissemination of injury and violence initiatives. The Core has focused its initial efforts on building the evaluation research portfolio in the area of unintentional prescription drug poisoning, the fastest growing cause of injury fatality in the state and the country. We have developed relationships with the Controlled Substances Reporting System, the Medicaid Controlled Substance Abuse Taskforce, Project Lazarus in Wilkes Co., and the Carolina Poison Center, each of which has resulted in a proposal being developed and submitted. We have also developed a relationship with the UNC Counseling and Wellness Services Office to design and implement an evaluation of the campus wide sexual violence bystander intervention program called One Act. Other evaluations are under development in a variety of other areas, including work to assess the implementation of a new carbon monoxide detector policy change, evaluate a newly re-organized program out of the CDC called Healthy Homes and Lead Poisoning Prevention Program, and identify outcomes of a teen driver education supplement that has been implemented in Cleveland County. Partnerships with NCDPH, PCANC, and the UNC Highway Safety Research Center and others are on-going. The Core also provides technical assistance to evaluation projects. For example, a large NIH funded multi-site trial of an intervention to reduce childhood obesity was funded at UNC's Department of Pediatrics along with four other sites. UNC's site was randomized to be a control site, where instead of an obesity reduction intervention they decided to use an injury prevention intervention. The researchers decided to take the control intervention seriously and treat it as a reverse trial in which the injury intervention could use the obesity intervention as its control. The evaluation core provided consultation and support to Eliana Perrin, MD in Pediatrics and her colleagues as they found themselves suddenly implementing an injury evaluation study for the first time.

The Core in Evaluation and Dissemination is also charged with training and capacity building around evaluation and dissemination. We have held three workshops or seminars in 2010, and expect to expand that number in coming years. We also plan to expand our efforts in dissemination research and practice.

Extensive additional evaluation and dissemination work has been conducted at the Center throughout its twenty-plus years of existence; on-going evaluation and dissemination projects not initiated by the Evaluation Core itself are described elsewhere in this report. 2010 Evaluation and Dissemination Projects developed through the IPRC Evaluation Core include the following (project descriptions are provided for projects not described elsewhere in this report):

[Affiliate Safe Community Support Center](#) (p.49)

[Period of Purple Crying®: Keeping Babies Safe in North Carolina](#) (p. 34)

[Formative Evaluation of the NC Circle of Parents® Program](#) (p. 35)

[One Act](#) (p. 42)

[Close to Home](#) (p. 43)

[Evaluation of NCDHHS Statewide Suicide Prevention Initiative](#) (p.44)

[Evaluation of NC TraCS](#) (p.47)

[Metrics](#) (p. 47)

Evaluation of NC TraCS

The North Carolina Translational and Clinical Sciences (NC TraCS) Institute at UNC-CH is one of 60 medical research institutions working together as a national consortium to improve the way biomedical research is conducted across the country. The consortium, funded by NIH through the NIH Clinical and Translational Science Awards (CTSA), shares a common vision to reduce the time it takes for laboratory discoveries to become treatments for patients, and to engage communities in clinical research efforts. It also is fulfilling the critical need to train a new generation of clinical researchers. To achieve these goals, TraCS offers a number of programs and services to assist researchers through all phases of the process of translating basic science discoveries into meaningful health advances.

Key Personnel

Dr. Marschall S. Runge serves as PI of the NC TraCS Institute; Christopher Ringwalt, DrPH, serves as PI of the external evaluation of the Institute.

Funding

National Institutes of Health

Contact

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Metrics: Proposed Indicators For Documenting Impact Of The Injury Control Research Center Program And Monitoring The Progress Of Centers Individually And Collectively

The primary aim of this project is to develop methods and feasible measures that can be used by the National Center for Injury Prevention and Control (NCIPC) for accomplishing two goals: 1) assessing the overall impact of the Injury Control Research Centers program and 2) monitoring the progress of individual Centers within the context of the overall logic model established by NCIPC for Injury Control Research Centers (ICRCs). In conducting this study, we used three primary sources of information. One, we obtained background information about evaluation of research centers from the literature and selected key informants of other federal research center program. Two, we queried directors of injury research centers on existing evaluation indicators used for their centers and on their opinions about proposed future evaluation indicators. Three, we queried selected staff at the CDC, both inside the National Center for Injury Prevention and Control as well as in selected other programs.

Project Period

2010 -2011

Key Personnel

Carol Runyan, PhD, MPH; Mariana Garrettson, MPH

Other Organizations of Institutions Represented

SAVIR (Society for Advancement of Violence and Injury Research)

Funding

National Center for Injury Prevention and Control

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Photo by Dan Sears

Southeastern Regional Injury Control Network (SERICN)

Since 1990, UNC IPRC has jointly sponsored the Southeastern Regional Injury Control Network (SERICN) with the University of Alabama at Birmingham Injury Control Research Center (UAB ICRC). Along with two regional Injury Centers, the Network includes the lead state public health agency injury prevention program and selected traffic safety, child-centered, and emergency medical services programs in each of the eight states in the southeast region. These include Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. In 2010, the group continued to host topic specific conference calls with regional and national experts.

Project Period:

Ongoing

Key Personnel:

Karen Strazza Moore, MPH, Mariana Garrettson, MPH

Other Organizations or Institutions Represented:

Emory Center for Injury Control; University of Alabama, Birmingham Injury Control Research Center; University of Kentucky Injury Prevention and Research Center State injury programs (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee); Mississippi Governor's Highway Safety Program; Children's Safety Network; Georgia Safe Kids; Maternal and Child Health Bureau; National Highway Traffic Safety Administration – Region IV; State and Territorial Injury Prevention Directors Association

Funding:

National Center for Injury Prevention and Control

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Technical Assistance and Monitoring Service to the Indian Health Service Tribal Injury Prevention Cooperative Agreements Program

Monitoring and technical assistance services are being provided to 22 Tribes/Tribal organizations funded through the Indian Health Service (IHS) Tribal Injury Prevention Cooperative Agreements Program (TIPCAP). UNC is providing the following technical assistance services: 1) annually developing and distributing three project newsletters; 2) conducting conference calls with sites three times per year; 3) providing on-going training and technical assistance to IHS and Tribal staff; 4) developing and conducting an annual training workshop; 5) providing evaluation consultation and technical assistance to IHS Headquarters, field, and Tribal staff; and 6) conducting one site visit to 13 Part I Basic and 9 Part 1 Advanced TIPCAP sites.

Project Period

2009 - 2011

Key Personnel

Carolyn Crump, PhD (PI); Robert J. Letourneau, MPH

Funding

Indian Health Service Injury Prevention Program

Contact

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Affiliate Safe Community Support Center

UNC IPRC has been designated as the Affiliate Safe Community Support Center for the World Health Organization's (WHO) Safe Communities worldwide initiative. To that end, the Center is working on establishing measures and strategies to improve the capacity of designated "safe communities" to effectively evaluate the Safe Communities America program in these local communities. The evaluation measures will be based on the six indicators established by the international WHO Safe Communities program, which include: 1) an infrastructure based on partnership and collaborations, governed by a cross-sectional group that is responsible for safety promotion in their community; 2) long-term, sustainable programs covering both genders, and all ages, environments and situations; 3) programs that target high-risk groups and environments, and programs that promote safety for vulnerable groups; 4) documentation of the frequency and causes of injuries; 5) evaluation of programs, processes, and the effects of change; and 6) participation in national and international safe communities networks. To accomplish this goal, the IPRC team is: 1) conducting an extensive review of relevant empirical literature on evaluation of Safe Communities internationally; 2) assessing current evaluation measures through review of annual reports of Safe Communities; and 3) reviewing the evaluation work of country affiliates such as the report card developed by Safe Communities Canada.

Key Personnel

Shrikant Bangdiwala, PhD (PI); Andrés Villaveces, MD, PhD; Karen Strazza Moore, MPH; Carol W. Runyan, PhD, MPH; Mariana Garrettson, MPH

Funding

Pending

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UNC IPRC strives to provide outstanding service to faculty members, students, and community partners working to further the field of injury prevention. Given that many of these services are described elsewhere in this report, the following is intended as an overview of services provided by UNC IPRC.

Biostatistical Support & Consultation

Senior biostatisticians, IT support and Research Assistants are available to provide consultation and assistance in both the development of new projects and the successful implementation of existing projects. The IPRC plans to expand statistical services. Methodological workshops are also offered.

Evaluation

The Evaluation Core supports researchers in developing and writing evaluation proposals and helps identify funding sources for evaluation research. The Core also provides technical training and training to community partners wanting to evaluate their community based injury prevention programs and helps connect researchers interested in evaluation research with community partners running programs that need evaluation.

Experienced Support Personnel to IPRC Investigators and Project Leaders

UNC IPRC has several senior project managers with a wealth of experience managing research, translational research, training and dissemination projects, as well as student research assistants, statistical programmers, biostatistical and administrative personnel.

Outreach & Communications

Effectively communicating injury prevention messages and findings to the general public, practitioners, policy makers and funders is a priority at IPRC. Communications services include disseminating findings or injury related news on campus, statewide and nationally through extensive media outlets and through professional outlets. Publicity is also offered for events such as seminars, trainings, and other educational offerings.

Development

UNC IPRC strives to connect faculty and students with a wide-range of funding opportunities, from federal, state and local sources, foundations, and individual donors. In 2010, friends of IPRC and IPRC alumni generously contributed to the newly established John D. Butts Scholarship, which resulted in the inaugural scholarship being presented to Lawrence Scholl, a doctoral student in the Department of Health Education and Health Behavior with a demonstrated interest in using fatality data in his work.

Technical Assistance

Technical Assistance is provided to organizations, practitioners and researchers in program and research planning, implementation, evaluation and dissemination.

Training

Extensive training offerings are provided by UNC IPRC, including national training programs such as PREVENT (p. 34), the seminar series, presentations given at conferences of partnering organizations, and student opportunities for undergraduates through post-doctoral students and fellows. Mentoring, grant development workshops for junior faculty, and methodological seminars are regular and on-going training opportunities for students, faculty and off-campus partners.

Administrative Support

Our administrative unit is experienced in pre and post award budget management and oversight and human resources.



Refereed Publications

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Dubowitz, H. (2010). Neglect of Children's Health Care. In J.E.B.Myers (Ed), APSAC Handbook of Child Maltreatment (3rd ed.). Newbury Park, CA: Sage Publications, Inc. (R)

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OCCUPATIONAL INJURY:

¹ U.S. Bureau of Labor Statistics; <http://www.bls.gov/iif/>

² NIOSH, Division of Safety Research; <http://www.cdc.gov/niosh/injury/>

³ NIOSH, Division of Safety Research; <http://www.cdc.gov/niosh/topics/youth/>

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VIOLENCE:

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